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A NEW SPECIES OF HESPERIIDAE, AND NOTES ON OTHERS, FROM PANAMA

(LEPIDOPTERA-RHOPALOCERA)

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On their visit to Panama during part of February and March, 1936, Drs. F. E. Lutz and W. T. Gertsch and Mr. W. C. Wood collected a considerable number of Hesperiidae among a large number of other insects. The hesperiid material adds a number of species new to the American Museum collection, as well as providing additional specimens in other species poorly represented in the collection.

All three members of the party collected for some time on Barro Colorado Island, the well-known Biological Station in Gatun Lake, in the Canal Zone. Drs. Lutz and Gertsch spent several days on El Volcan, Chiriqui Province, in the extreme upper part of Panama near the Costa Rica border, where they collected in forest and open country at an altitude of approximately 4300 feet. Dr. Gertsch made a short trip to Cerro Punta, higher up on the mountain, where he collected in a forested canyon region at an altitude of approximately 6000 feet.

It is quite natural that the majority of the species collected have been previously recorded from the Central American region but it is also to be expected that the large amount of material they secured from a region so rich in the insect fauna might contain new records of distribution and even undescribed species. This expectation is fulfilled in one apparently undescribed species, the description of which will be found on another page of this paper, and in seven species which do not seem to have been previously recorded from Central America, and these are recorded here with notes on two others.

The species are distributed in two subfamilies, the Pyrginae and the Hesperiinae. In the Pyrginae there are represented thirty-eight genera and seventy-three species and forms; in the Hesperiinae forty-eight genera and seventy-nine species and forms. There also remains one unidentified female belonging in the Hesperiinae.

All of the material, including the type of the new species, is in the collection of The American Museum of Natural History.

Pyrginae

Quadrus assecla (Mabille)

Pythonides assecla MABILLE, 1883, Ann. Soc. Ent. Belg., XXVII, C. R., p. lxxvi.

Described from "East Brasil." There are specimens in the Museum collection from French Guiana; Dutch Guiana; Brasil (Amazonian region); Perú; and Bolivia.

One male and one female collected on Barro Colorado Island, March 11–14.

Cyclosemia (?) paulinus (Cramer)

Papilio paulinus CRAMER, 1782, 'Pap. Exot.,' IV, p. 211, Pl. cccxci, figs. G, H.

Described from Surinam. Cramer's figures represent a female. This species is probably not congeneric with the type of *Cyclosemia.* There are specimens in the Museum collection from British Guiana; French Guiana; and Peru.

One male collected on Barro Colorado Island, March 19.

Ouleus cyrna (Mabille)

Achlyodes cyrna MABILLE, 1895, Ann. Soc. Ent. France, Bull., p. lvi.

Achlyodes simplex GODMAN AND SALVIN, 1895, 'Biol. Centr.-Amer.,' Rhop., II, p. 396, Pl. LXXXVI, figs. 15, 16.

Achlyodes fasciata GODMAN AND SALVIN, 1895, 'Biol. Centr.-Amer.,' Rhop., II, p. 396, Pl. LXXXVI, fig. 17.

Achlyodes cyrna GODMAN AND SALVIN, 1896, 'Biol. Centr.-Amer.,' Rhop., II, p. 430 (footnote). GODMAN, 1901, p. 635; and p. 739, (Supplement), 1901.

The type locality for *cyrna, simplex* and *fasciata* is Chiriqui. Godman and Salvin sank their *fasciata* as a synonym of *cyrna* Mabille and as *simplex* is the male of *fasciata* that name must also be sunk as a synonym of *cyrna.*

The two sexes differ somewhat in their superficial appearance, as shown by the Godman and Salvin figures of *simplex*, the male, and *fasciata*, the female, but this condition is found not infrequently elsewhere among the Hesperiidae.

Three males and two females were collected on El Volcan, February 22–25, March 7.

Hesperiinae

Rhinthon trimaculata (Herrich-Schäffer)

Cobalus trimaculata HERRICH-SCHÄFFER, 1869, Corresp.-blatt. d. zool.-min. Ver. Regensburg, XXIII, p. 200.

Hesperia trimaculatus PLÖTZ, 1882, Stett. Ent. Zeit., XLIII, p. 327. GODMAN, 1907, Ann. and Mag. Nat. Hist., (7) XX, p. 139.

Cobalus trimaculata DRAUDT, 1923, in Seitz 'Macrolep. of the World,' V, p. 957, Pl. 185 i.

The original description does not give the type locality. Both Plötz and Draudt give Brasil. Draudt figures the species. The locality "Brasil" is very indefinite considering the vast area of that country extending over five degrees above and nearly thirty-five degrees of latitude below the equator and nearly forty-five degrees of longitude wide in the northern part, but in the writer's collection there are a male and two females of this species from Massaranduba-Blumenau and Hansa-Humboldt, both in the Province of Santa Catharina, south Brasil, and Godman states that there is a male specimen in the Godman and Salvin collection from Minas Geraës, which is also located toward the southern part of Brasil. Both of these Brasilian Provinces are far removed from northern Panama.

The male has the usual stigma on the primaries, a line of raised scales along the upper side of vein 1 in the basal half, and rather indistinct.

One male was collected on El Volcan, February 24, and has the cell spots of the primaries formed by two short, white streaks one above the other; the two discal spots are rather small. In the male from Massaranduba-Blumenau the two stripes of the cell are heavier and narrowly joined in the center; the two discal spots are much larger than in the El Volcan specimen, especially that in interspace 2.

Whether or not this difference in maculation constitutes a constant racial character cannot be decided from the single male collected. The form of the male genitalia is identically the same in the specimens from both localities.

Eutychide gertschi, new species

Figure 1

The single male taken superficially more closely resembles *Oeonus degener* Plötz than any of the *Eutychide* species with which the writer is familiar, but the stigma of the primaries is differently formed than that of *degener*. The form of the stigma is similar to but not developed as much as that usually found in *Eutychide*, it consists of a straight, narrow stripe in the base of interspace 2, lying close under the cell, not reaching as far upward as the rise of vein 3, this stripe is widened a little at its base and produced a very little along the upper side of vein 2; another short, longitudinal stripe lies just below vein 2; a still shorter stripe lies just above vein 1.

Upper side dark brown. Primaries with a very narrow, oblique spot near the base of interspace 2; another small, roundish one in the basal third of interspace 3,

both white and semi-hyaline. A very minute white subapical spot near the base of interspace 6. There are long hairs at the base of the wings below the cell and along the inner margin below vein 1. Secondaries immaculate, with long hairs at the base and along the abdominal fold. Fringes of both wings brown, those of the secondaries paler at the tips.

Beneath reddish brown. Primaries darkened in the basal third below the cell. Spots of upper side repeated and a little larger, and in addition there is a minute, ill-defined subapical spot in interspace 7, and a minute accumulation of yellowish scales in the cell on the upper border in the apical third, and a diffuse, elongate spot of yellow scales in interspace 1 below the semi-hyaline spot in interspace 2. Secondaries with a small but very noticeable yellow spot near the end of the cell and a curved discal row of three very minute yellowish dots, the upper one opposite the end of the cell and the others below it, one in each interspace; below these is a small, hazy accumulation of darker fulvous scales not forming a definite spot.

Fig. 1. Male genitalia of *Eutychide gertschi*, new species.

Upper side of body dark brownish, abdomen with some dark fulvous hairs. Top of head and collar black and fulvous with green hairs intermixed. Tegulae brown along the sides, blackish at the base and along inner margin and mixed with green. Beneath: palpi mostly fulvous and black with a greenish reflection at the base. Pectus and thorax dark reddish fulvous with greenish reflections. Abdomen brown with fulvous hairs in the center. Antennae black above; beneath the basal half of the club is fulvous and the shaft minutely spotted with that color at the joints.

Expanse.—32 mm.

HOLOTYPE.—Male, El Volcan, Chiriqui, Panama, February 23, 1936.

This species is named for Dr. W. T. Gertsch, who collected the specimen.

In the male genitalia the uncus is very broad at the apex, where on each side it has a small triangular flange, there are two ventral arms projecting downward and curving forward and terminating in a sharp point. The girdle is long and slender. The saccus short and slender. The claspers are short, the left one with the apex turned upward, on which there are small teeth and back of which a stout tooth projects upward; the right clasper is apically a little rounded toward the back and also carries small teeth followed by a stout tooth similar to that of the left clasper. The aedoeagus is rather long and stout.

Phanes almoda (Hewitson)

Hesperia almoda HEWITSON, 1866, Trans. Ent. Soc. London, p. 499.—1869, 'Exot. Butt.,' IV, *Hesperia*, Pl. IV, fig. 35.

Phanes almoda GODMAN, 1900, 'Biol. Centr.-Amer.,' Rhop., II, p. 549.

Hewitson merely stated that his type was in the Boisduval collection and gave no locality from whence it came, nor did he give one in his subsequent mention of *almoda* in 'Exotic Butterflies.' Godman mentions Venezuela and Guiana. There are specimens in the writer's collection from French Guiana; Trinidad, B. W. I.; and southern Brasil.

Two males collected on Barro Colorado Island, March 13–17.

Phanes rezia (Plötz)

Hesperia rezia PLÖTZ, 1883, Stett. Ent. Zeit., XLIV, p. 35.

Plötz gives Brasil as the type locality. There is a male specimen from British Guiana in the writer's collection.

Three females collected on El Volcan, February 22–28.

Phlebodes tiberius (Möschler)

Apaustus tiberius MÖSCHLER, 1882, Verh. der k.-k. zool.-bot. Ges. Wien, XXXII, p. 329.

The specimens collected on El Volcan differ considerably from typical and possibly represent a local race or form. The males differ principally on the under side of the wings. On the primaries beneath the apical area is more yellowish brown and the darkened discal and basal areas are more intensely black. On the secondaries there is a red-brown outer marginal band, narrow at the inner angle and widening toward the anal angle, the area from the inner margin of this band to the base of the wings is reddish yellow, a little more reddish at the base itself, the usual discal band of small spots is almost obliterated and but barely seen where the paler basal area meets the red-brown marginal band; the usual yellow veins are but feebly indicated in the marginal band.

The females differ on the upper side of the wings from typical females in the very minute and somewhat darker yellowish discal spots of the primaries, the subapical dots either absent or very minute. On the under side of the wings the primaries have the apical veins but feebly paler than the ground instead of prominently yellow. On the secondaries the veins are but little lighter than the ground and the spots of the discal band are very small and the whole under side of these wings presents a very diffuse appearance.

Möschler's type came from Surinam but the species has a very wide distribution, extending from Mexico to southern Brasil, and is very

variable in maculation, appearing in several distinct forms which seem to represent well-defined races in some localities. The darkest individuals the writer has seen, and which have the spots of the primaries reduced in size, are those from Central American localities, the northern part of the range, and these, with the exception of the specimens from El Volcan, are assignable to the typical form of *tiberius*. Such specimens have no spots on the upper side of the secondaries or there is but the haziest indication of them. Evidently this form extends into the northern part of South America as Möschler's description very well fits the Central American insects, but several other forms also appear in this region, more pronounced in the males than in the females, and they vary on the upper side in the larger size of the discal spots of the primaries and on the secondaries in having small, somewhat diffuse discal spots to a well-defined, orange discal band with the spot opposite the cell produced inwardly to or slightly into the cell; and on the under side in having the ground color of the secondaries brown with prominently contrasting yellow veins to having the basal area variably suffused with yellow and the veins not so prominently yellow. The *reticulata* of Plötz is represented by those individuals in the males having larger discal spots on the primaries and a well-developed discal band of the secondaries, with the elongated spot opposite the cell, or in having three well-defined discal spots of these wings on the upper side; and on the under side in having the basal area yellow, or partly yellow, or brown, and yellow veins. South Brasilian specimens differ considerably from those from the more northern localities in having larger discal spots of both wings, the elongate spot of the band of the secondaries sometimes reaching almost to the base of the cell, and on the under side the whole basal area of the secondaries is pale cream-color, almost white, with a few small reddish spots near the base and an outer marginal band of the same color.

A study of the male genitalia in five distinct forms of *tiberius* results in finding not the slightest difference of specific value among them. A peculiar character of the male genitalia is found in dense patches of long hair-like bristles which arise from the back of the tegmen and extend forward over the base of the uncus. These bristles are easily removed and unless they are recognized for what they are may be removed during the process of cleaning the parts preparatory to making the slide and lost; however, if they have been accidently removed, the place on the tegmen from which they arose is plainly indicated by an area of black dots.

Two males and three females of the peculiar form mentioned were collected on El Volcan, February 20–25, March 6.

Euroto potaro Williams and Bell

Euroto potaro WILLIAMS AND BELL, 1931, Trans. Amer. Ent. Soc., LVII, p. 277; p. 278, Fig. 29, male gen.; Pl. I, fig. 10.

Described from British Guiana and there are also specimens in the writer's collection from French Guiana; Trinidad, B. W. I.; and southern Brasil.

One male and three females collected on Barro Colorado Island, March 10–16.

Eutocus lucia (Capronnier)

Carystus lucia CAPRONNIER, 1874, Ann. Soc. Ent. Belg., XVII, p. 35, Pl. I, fig. 9.

Described from Therezopolis, Brazil. There are specimens in the writer's collection from Bolivia and southern Brasil.

Two females collected on El Volcan, February 19–23.